

A photograph of a lightning strike against a dark, cloudy sky. The lightning bolt is bright white and curved, striking from the top left towards the center. Below the lightning, there's a dark silhouette of what appears to be a forest or a line of trees. The overall atmosphere is dramatic and suggests a stormy weather condition.

Zeus Users' Meeting

January 25, 2012

Agenda

- Onboarding Users
- Batch Queue structure
- Data Transfer Nodes
- Disk Usage Policy
- Quick Start Training
- Current Schedule
- Open Forum

Onboarding Users

- We've had a few glitches. We have a plan in place that should enable us to begin the process today.
- We will let a set of users know either later today or tomorrow to try to login to Herc (aka tfe1)
- Over the next few days we will onboard as many users as possible before 1 February.

Batch Queue Structure

- There will be 6 queues. We have a starting point for each queue's characteristics but we may have to change it over time as we understand our users' needs.
 - batch (default, 8 hour maximum)
 - urgent (higher priority, 2x or more charge, 8 hour maximum)
 - debug (higher priority, 30 minute maximum)
 - service (run on front-end, shared, 24 hour maximum)
 - bigmem (run on 96GB nodes, 8 hour maximum)
 - novel (run on large portion of machine, requires special arrangement)

Data Transfer Nodes

- Node to support externally initiated data transfers
- Different nodes will exist to provide different functionality depending on where transfers are initiated
- First node type supports transfers from .noaa.gov addresses.

Data Transfer Nodes

- Ssh based transfer protocols are supported
 - Scp, sftp, rsync, bbcp
- Authentication is based on using your RSA token
- Scratch filesystems are accessible (/scratch1, / scratch2)
 - /home is not accessible via the DTN
- Unattended data transfer through the DTN will be supported for users (or group accounts) that require it.

Note: The hostname for the DTN service will be documented on the wiki site (<https://nesccdocs.rdhpcs.noaa.gov>) before Zeus goes live.

Data Transfer Nodes

```
# scp bigfile1 Craig.Tierney@$SERVER:/scratch2/Craig.Tierney
Password: (TYPE IN YOUR TOKEN RESPONSE HERE)
bigfile1                                100% 4096MB  56.1MB/s   01:13
#
[ctierney@fe4 s4]$ bbcp -P 1 -f -s 8 -w 16M bigfile2
Craig.Tierney@$SERVER:/scratch2/Craig.Tierney
Password: (TYPE IN YOUR TOKEN RESPONSE HERE)
...
bbcp: Creating /scratch2/Craig.Tierney/bigfile2
...
bbcp: 120125 13:59:28  72% done; 260.2 MB/s
bbcp: 120125 13:59:29  77% done; 255.6 MB/s
bbcp: 120125 13:59:30  85% done; 259.3 MB/s
bbcp: 120125 13:59:31  94% done; 267.0 MB/s
#
```

BBCP can move data much faster than scp. BBCP is installed on Jet and Gaea. If you have to move lots of data quite often ask your system administrator to install it for you (may require some security changes).

Disk Usage Policy

- /home
 - Per user quota (default 5GB)
- /scratch[12]
 - Per group quota (determined by Portfolio Manager)
 - Soft quota at 100%, hard quota at 110%
 - No purging
 - ***NO AUTOMATIC BACKUP!***

Disk Usage

- Squota command will provide /scratch usage information (example from Jet on next slide)

squota

Super quota report for user ctierney, Wed Jan 25 05:39:40 2012

- usage and quota listed in GB
- RealUse is the current group disk usage as reported by the system
- EstUse is the amount measured by du, may not be accurate if group ownership is incorrect

Dir	Quota	RealUse	EstUse	Percentage	Last Estimated
/home/ctierney	6	5		77%	Wed Jan 25 05:39:40 2012
/lfs0/projects/jetmgmt	5000	3352	3354	67.1%	Mon Jan 23 12:57:56 2012
DDN			1	0.0%	Mon Jan 23 12:57:41 2012
chadr			1	0.0%	Mon Jan 23 12:57:42 2012
cohen			5	0.1%	Mon Jan 23 12:57:40 2012
...					
/lfs1/projects/jetmgmt	15000	6431	8545	57.0%	Tue Jan 24 12:10:26 2012
DDN			26	0.2%	Tue Jan 24 12:09:29 2012
b1			1	0.0%	Tue Jan 24 12:09:39 2012
b2			1	0.0%	Tue Jan 24 12:09:40 2012
...					
/pan1/projects/jetmgmt	9800	2378	2379	24.3%	Wed Jan 25 05:30:04 2012
...					
/lfs1/projects/sepp	2000	1724	1729	86.5%	Tue Jan 24 12:47:15 2012
2010BMSuite			394	19.7%	Tue Jan 24 12:45:04 2012
LBHWork			4	0.2%	Tue Jan 24 12:47:02 2012
...					

Quick Start Training

- Planned to be 1.5 – 2 hours
- Assume a fair amount of knowledge about HPCs
- How compile, link, submit jobs, monitor jobs, recommended compile options, etc.
- Will be Monday or Tuesday of next week (may be held twice if enough interest)

Current Schedule

- Still Holding
- Herc – available to select users now
- Onboarding of users – begins tomorrow and continues through 1 February
- Zeus access – 1 February



Thank You!

now...

Open Forum